



PCT

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/522,535

DATE: 02/08/2005

TIME: 11:48:25

Input Set : A:\37629.txt

Output Set: N:\CRF4\02082005\J522535.raw

3 <110> APPLICANT: Josef Prassler  
 4 Yvonne Stark  
 6 <120> TITLE OF INVENTION: Novel Tricistronic Vectors and Uses Therefor  
 8 <130> FILE REFERENCE: 37629-0064US  
 C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/522,535  
 C--> 12 <141> CURRENT FILING DATE: 2005-01-27  
 14 <150> PRIOR APPLICATION NUMBER: PCT/IB03/03681  
 16 <151> PRIOR FILING DATE: 2003-07-30  
 18 <150> PRIOR APPLICATION NUMBER: 60/399,150  
 20 <151> PRIOR FILING DATE: 2002-07-30  
 22 <160> NUMBER OF SEQ ID NOS: 9  
 24 <170> SOFTWARE: PatentIn version 3.1  
 26 <210> SEQ ID NO: 1  
 28 <211> LENGTH: 86  
 30 <212> TYPE: DNA  
 32 <213> ORGANISM: artificial sequence  
 34 <220> FEATURE:  
 36 <223> OTHER INFORMATION: synthetic construct  
 38 <220> FEATURE:  
 40 <221> NAME/KEY: misc\_feature  
 42 <222> LOCATION: (1)..(86)  
 44 <223> OTHER INFORMATION: synthetic construct  
 46 <400> SEQUENCE: 1  
 47 ctagtatacg agggcaaaaa atgaaaaaac tgctgttcgc gattccgctg gtggtgccgt 60  
 49 tctatagcca tagcgactac tgcgac 86  
 52 <210> SEQ ID NO: 2  
 54 <211> LENGTH: 82  
 56 <212> TYPE: DNA  
 58 <213> ORGANISM: artificial sequence  
 60 <220> FEATURE:  
 62 <223> OTHER INFORMATION: synthetic construct  
 64 <220> FEATURE:  
 66 <221> NAME/KEY: misc\_feature *insert had return*  
 68 <222> LOCATION: (1)..(82) <223> synthetic construct  
 70 <400> SEQUENCE: 2  
 71 gtcgcagtag tcgctatggc tatagaacgg caccaccagc ggaatcgca acagcagttt 60  
 73 ttccattttt tgccctcgta ta 82  
 76 <210> SEQ ID NO: 3  
 78 <211> LENGTH: 5049  
 80 <212> TYPE: DNA  
 82 <213> ORGANISM: artificial sequence  
 84 <220> FEATURE:  
 86 <223> OTHER INFORMATION: synthetic construct

Does Not Comply  
Corrected Diskette Needed

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/522,535

DATE: 02/08/2005

TIME: 11:48:25

Input Set : A:\37629.txt

Output Set: N:\CRF4\02082005\J522535.raw

```

88 <220> FEATURE:
89 <221> NAME/KEY: misc_feature
90 <222> LOCATION: (1)..(5049)
91 <223> OTHER INFORMATION: synthetic construct
92 <400> SEQUENCE: 3
93 ctagataacg agggcaaaaa atgaaaaaga cagctatcgc gattgcagtg gcaactggctg      60
94 gtttcgctac cgtagcgcag gccgatatcg tgctgaccca gagcccggcg accctgagcc      120
95 101 tgtctccggg cgaacgtgcg accctgagct gcagagcgag ccagtctgtt tctcgttctt      180
96 103 atctggcttg gtaccagcag aaaccaggtc aagcaccgcg tctattaatt tatggtgctt      240
97 105 ctcgtcgtgc aactgggggtc ccggcgcggt tttagcggctc tggatccggc acggatttta      300
98 107 ccctgaccat tagcagcctg gaacctgaag actttgcgac ttattattgc cagcagcgtg      360
99 109 gtaattattc tattaccttt ggccagggtg cgaaagttga aattaaacgt acggtggctg      420
100 111 ctccgagcgt gtttattttt ccgcccagcg atgaacaact gaaaagcggc acggcgagcg      480
101 113 tgggtgtgct gctgaacaac ttttatccgc gtgaagcgaa agttcagtgg aaagtagaca      540
102 115 acgcgctgca aagcggcaac agccaggaaa gcgtgaccga acaggatagc aaagatagca      600
103 117 cctattctct gagcagcacc ctgaccctga gcaaagcggg ttatgaaaaa cataaagtgt      660
104 119 atgcgtgcga agtgacccat caaggtctga gcagcccggg gactaaatct ttaaatcgtg      720
105 121 gcgagggcctg ataagcatgc gtaggagaaa ataaaatgaa acaaagcact attgcactgg      780
106 123 cactcttacc gttgctcttc acccctgtta ccaaagccca ggtgcaattg gtggaaagcg      840
107 125 gcggcggcct ggtgcaaccg ggccggcagcc tgcgctctgag ctgcgcggcc tccggattta      900
108 127 ccttttcttc ttatgggtgt aattgggtgc gccaaagccc tgggaagggt ctcgagtggg      960
109 129 tgagcgggat ccattattct ggtagctcta cctattatgc ggatagcgtg aaaggccgtt      1020
110 131 ttaccatttc acgtgataat tcgaaaaaca ccctgtatct gcaaatgaac agcctgcgtg      1080
111 133 cggaagatac ggccgtgtat tattgcgcgc gtgctcttca taagtgggct ggttgggggt      1140
112 135 ttgatcattg gggccaaggc accctgggtg cggttagctc agcgtcgacc aaaggtccaa      1200
113 137 gcgtgtttcc gctggctccg agcagcaaaa gcaccagcg cggcacgggt gccctgggct      1260
114 139 gcctgggtta agattatttc ccggaaccag tcaccgtgag ctggaacagc ggggcggtga      1320
115 141 ccagcggcgt gcataccttt ccggcggtgc tgcaaagcag cggcctgtat agcctgagca      1380
116 143 gcgttgtgac cgtgccgagc agcagcttag gcaactcagc ctatatttgc aacgtgaacc      1440
117 145 ataaaccgag caacaccaa gtggataaaa aagtggaaac gaaaagcgaa ttcccagggg      1500
118 147 ggagcggagg cgcgcgcac catcatcacc atcactgctg ataagcttga cctgtgaagt      1560
119 149 gaaaaatggc gcagattgtg cgacattttt tttgtctgcc gtttaatgaa attgtaaagc      1620
120 151 ttaatatatt gttaaaattc gcgttaaat tttgttaaat cagctcattt ttaaccaat      1680
121 153 aggccgaaat cggcaaaatc ccttataaat caaaagaata gaccgagata gggttgagt      1740
122 155 ttgttccagt ttggaacaag agtccactat taaagaacgt ggactccaac gtcaaagggc      1800
123 157 gaaaaaccgt ctatcagggc gatggcccac tacgagaacc atcacccata tcaagttttt      1860
124 159 tggggtcgag gtgccgtaaa gcaactaaatc ggaaccctaa agggagcccc cgatttagag      1920
125 161 cttgacgggg aaagccggcg aacgtggcga gaaaggaagg gaagaaagcg aaaggagcgg      1980
126 163 gcgctagggc gctggcaagt gtagcgggtc cgctgcgcgt aaccaccaca cccgccgcgc      2040
127 165 ttaatgcgcc gctacagggc gcgtgctagc catgtgagca aaaggccagc aaaaggccag      2100
128 167 gaaccgtaaa aaggccgcgt tgctggcggt tttccatagg ctccgcccc ctgacgagca      2160
129 169 tcacaaaaat cgacgtcaa gtcagaggtg gcgaaaccgg acaggactat aaagatacca      2220
130 171 ggcgtttccc cctggaagct cctcgtgcg ctctcctgtt ccgaccctgc cgcttaccgg      2280
131 173 atacctgtcc gcctttctcc cttcggaag cgtggcgctt tctcatagct cacgctgtag      2340
132 175 gtatctcagt tcggtgtagg tcgttcgctc caagctgggc tgtgtgacg aacccccgt      2400
133 177 tcagtccgac cgctgcgcct tatccggtaa ctatcgtctt gagtccaacc cggtaagaca      2460
134 179 cgacttatcg ccaactggcag cagccactgg taacaggatt agcagagcga ggtatgtagg      2520
135 181 cgggtctaca gagttcttga agtggtggcc taactacggc tacactagaa gaacagtatt      2580
136 183 tggtatctgc gctctgctgt agccagttac cttcggaaaa agagttggta gctcttgatc      2640

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/522,535

DATE: 02/08/2005

TIME: 11:48:25

Input Set : A:\37629.txt

Output Set: N:\CRF4\02082005\J522535.raw

```

185 cggcaaaacaa accaccgctg gtagcggtgg tttttttggt tgcaagcagc agattacgcg 2700
187 cagaaaaaaa ggatctcaag aagatccttt gatcttttct acgggggtctg acgctcagtg 2760
189 gaacgaaaac tcacgttaag ggatttttgt cagatctagc accaggcggt taagggcacc 2820
191 aataactgcc ttaaaaaaat tacgccccgc cctgccactc atcgcagtac tgttgtaatt 2880
193 cattaagcat tctgccgaca tggaagccat cacaaacggc atgatgaacc tgaatcgcca 2940
195 gcggcatcag caccttgtcg ccttgcgat aatatttgcc catagtgaac acgggggcga 3000
197 agaagttgtc catattgggt acgttttaaa caaaactggt gaaactcacc cagggtattg 3060
199 ctgagacgaa aaacatattc tcaataaacc ctttagggaa ataggccagg ttttcaccgt 3120
201 aacacgccac atcttgcgaa tatatgtgta gaaactgccg gaaatcgctg tggattcac 3180
203 tccagagcga tgaaaacggt tcagtttgct catggaaaac ggtgtaacaa gggggaacac 3240
205 tatcccatat caccagctca cgtcttttca ttgccatacg gaactccggg tgagcattca 3300
207 tcaggcgggc aagaatgtga ataaaggccg gataaaactt gtgcttattt ttctttacgg 3360
209 tctttaaaaa ggccgtaata tccagctgaa cgggtctggt ataggtagat tgagcaactg 3420
211 actgaaatgc ctcaaaatgt tctttacgat gccattggga tatatcaacg gtggtatata 3480
213 cagtgtattt tttctccatt tttagcttct tagctcctga aaatctcgat aactcaaaaa 3540
215 atacgcccgg tagtgatctt atttcattat ggtgaaagt ggaacctcac ccgacgtcta 3600
217 atgtgagtta gtcactcat taggcacccc aggttttaca ctttatgctt ccggctcgta 3660
219 tgttgtgtgg aattgtgagc ggataacaat ttcacacagg aaacagctat gaccatgatt 3720
221 acgaatttct agtatacgag ggcaaaaaat gaaaaaactg ctgttcgcca ttccgctggt 3780
223 ggtgccgttc tatagccata gcgactactg cgacatcgag tttgcagaaa cagttgaaag 3840
225 ttgttttagc aaaccccata cagaaaattc atttactaac gtctggaaag acgacaaaac 3900
227 tttagatcgt tacgctaact atgagggctg tctgtggaat gctacaggcg ttgtagtttg 3960
229 tactggtgac gaaactcagt gttacgggtac atgggttctt attgggcttg ctatccctga 4020
231 aaatgagggg ggtggctctg aggggtggcg ttctgagggg ggcggctctg aggggtggcg 4080
233 tactaaacct cctgagtacg gtgatacacc tattccgggc tatacttata tcaacctct 4140
235 cgacggcact tatccgctg gtactgagca aaaccccgct aatcctaata cttctcttga 4200
237 ggagtctcag cctcttaata ctttcatggt tcagaataat aggttccgaa ataggcagg 4260
239 ggcattaact gtttatacgg gcaactgttac tcaaggcact gaccccggtt aaacttatta 4320
241 ccagtacact cctgtatcat caaaagccat gtatgacgct tactggaacg gtaaatcag 4380
243 agactgcgct ttccattctg gctttaatga ggatccattc gtttgtgaat atcaaggcca 4440
245 atcgtctgac ctgcctcaac ctctgtcaa tgctggcggc ggctctggtg gtggttctgg 4500
247 tggcggtctt gaggggtggc gctctgaggg tggcggttct gaggggtggc gctctgaggg 4560
249 tggcggttcc ggtggcggt cgggttccgg tgattttgat tatgaaaaaa tggcaaacgc 4620
251 taataagggg gctatgaccg aaaatgccga tgaaaacgcg ctacagtctg acgctaaagg 4680
253 caaacttgat tctgtcgcta ctgattacgg tgctgctatc gatggtttca ttggtgacgt 4740
255 ttccggcctt gctaattgta atggtgctac tgggtgattt gctggctcta attcccaaat 4800
257 ggetcaagtc ggtgacgggt ataattcacc tttaatgaat aatttccgtc aatatttacc 4860
259 ttctttgcct cagtgggttg aatgtcgccc ttatgtcttt ggcgctggtg aaccatatga 4920
261 attttctatt gattgtgaca aaataaactt attccgtggt gtctttgcgt ttcttttata 4980
263 tgttgccacc tttatgtatg ttttttcgac gtttgctaac atactgcgta ataaggagtc 5040
265 ttaagtaat
268 <210> SEQ ID NO: 4
270 <211> LENGTH: 3563
272 <212> TYPE: DNA
274 <213> ORGANISM: artificial sequence
276 <220> FEATURE:
278 <223> OTHER INFORMATION: synthetic construct
280 <220> FEATURE:
282 <221> NAME/KEY: misc_feature

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/522,535

DATE: 02/08/2005

TIME: 11:48:25

Input Set : A:\37629.txt

Output Set: N:\CRF4\02082005\J522535.raw

284 &lt;222&gt; LOCATION: (1)..(3563)

286 &lt;223&gt; OTHER INFORMATION: synthetic construct

288 &lt;400&gt; SEQUENCE: 4

```

289 tctagagcat gcgtaggaga aaataaaatg aaacaaagca ctattgcact ggcactctta      60
291 ccgttgctct tcacccctgt taccaaagcc gactacaaag atgaagtga attgaaagaa      120
293 agcggcccg ccctggtgaa accgacccaa accctgaccc tgacctgtac cttttccgga      180
295 tttagcctgt ccacgtctgg cgttggcgtg ggctggattc gccagccgcc tgggaaagcc      240
297 ctcgagtggc tggctctgat tgattgggat gatgataagt attatagcac cagcctgaaa      300
299 acgcgtctga ccattagcaa agatacttcg aaaaatcagg tgggtctgac tatgaccaac      360
301 atggaccggc tggatacggc cacctattat tgcgcgcgtt ttgatccttt ttttgattct      420
303 ttttttgatt attggggcca aggcaccctg gtgacggtta gctcagcggg tggcggttct      480
305 ggcggcggtg ggagcggtg cgggtggttct ggcggtggtg gttccgatat cgtgctgacc      540
307 cagccgcctt cagtgaagtgg cgcaccaggt cagcgtgtga ccatctctgt tagcggcagc      600
309 agcagcaaca ttggcagcaa ctatgtgagc tggtagcagg agttgcccgg gacggcgccg      660
311 aaactgctga tttatgataa caaccagcgt cctcaggcgg tgccggatcg ttttagcgga      720
313 tccaaaagcg gcaccagcgc gagccttgcg attacgggccc tgcaaagcga agacgaagcg      780
315 gattattatt gccagagcta tgaccagaat gctcttggtg aggtgtttgg cggcggcacg      840
317 aagttaaccg ttcttggcca ggaattcgag cagaagctga tctctgagga ggatctgaac      900
319 taggggtggtg gctctggttc cgggtgatttt gattatgaaa agatggcaaa cgctaataag      960
321 ggggctatga ccgaaaatgc cgatgaaaac gcgctacagt ctgacgctaa aggcaaactt     1020
323 gattctgtcg ctactgatta cgggtgctgt atcgatggtt tcattggtga cgtttccggc     1080
325 cttgctaattg gtaatggtgc tactggtgat tttgctggct ctaattccca aatggctcaa     1140
327 gtcggtgacg gtgataattc acctttaatg aataatttcc gtcaatattt accttccctc     1200
329 cctcaatcgg ttgaatgtcg ccttttgcgt tttggcgtcg gtaaaccata tgaattttct     1260
331 attgattgtg acaaaaataa cttattccgt ggtgtctttg cgtttctttt atatgttgcc     1320
333 acctttatgt atgtattttc tacgtttgct aacatactgc gtaataagga gtcttgataa     1380
335 gcttgacctg tgaagtgaaa aatggcgagc attgtgcgac attttttttg tctgcogttt     1440
337 aatgaaattg taaacgttaa tattttgtta aaattcgcgt taaatttttg ttaaatcagc     1500
339 tcatttttta accaataggc cgaaatcggc aaaatccctt ataaatcaaa agaatagacc     1560
341 gagatagggt tgagtgttgt tccagtttgg aacaagagtc cactattaaa gaacgtggac     1620
343 tccaacgtca aagggcgaaa aaccgtctat cagggcgatg gccactacg agaaccatca     1680
345 ccctaataca gttttttggg gtcgaggtgc cgtaaagcac taaatcggaa ccctaaaggg     1740
347 agcccccgat ttagagcttg acggggaaaag ccggcgaaac tggcgagaaa ggaagggaag     1800
349 aaagcgaaaag gagcggggcg tagggcgctg gcaagtgtag cggtcacgct gcgcgtaacc     1860
351 accacacccg ccgcgcttaa tgcgcgcgta cagggcgcgct gctagccatg tgagcaaaaag     1920
353 gccagcaaaa ggccaggaac cgtaaaaagg ccgcgttgct ggcgtttttc cataggctcc     1980
355 gccccccctg cgagcatcac aaaaatcgac gctcaagtca gaggtggcga aaccgcagac     2040
357 gactataaag ataccaggcg tttccccctg gaagctccct cgtgcgctct cctgttccga     2100
359 ccctgcccgt taccggatac ctgtccgcct ttctcccttc ggggaagcgtg gcgctttctc     2160
361 atagctcacg ctgtaggtat ctcagttcgg tgtaggtcgt tcgctccaag ctgggctgtg     2220
363 tgcacgaacc ccccgttcag tccgaccgct gcgccttacc cggtaactat cgtcttgagt     2280
365 ccaacccggg aagacacgac ttatcgccac tggcagcagc cactggtaac aggttagca     2340
367 gagcgaggtg tgtaggcggg gctacagagt tcttgaagtg gtggcctaac tacggctaca     2400
369 ctagaagaac agtatttggg atctgcgctc tgctgtagcc agttaccttc ggaaaaagag     2460
371 ttggtagctc ttgatccggc aaacaaacca ccgctggtag cgggtggtttt tttgtttgca     2520
373 agcagcagat tacgcgcaga aaaaaaggat ctcaagaaga tcctttgatc ttttctacgg     2580
375 ggtctgacgc tcagtggaac gaaaactcac gttaagggat tttggtcaga tctagcacca     2640
377 ggcgtttaag ggcaccaata actgccttaa aaaaattacg ccccgccctg ccaactcatc     2700
379 cagtactgtt gtaattcatt aagcattctg ccgacatgga agccatcaca aacggcatga     2760

```

## RAW SEQUENCE LISTING

DATE: 02/08/2005

PATENT APPLICATION: US/10/522,535

TIME: 11:48:25

Input Set : A:\37629.txt

Output Set: N:\CRF4\02082005\J522535.raw

```

381 tgaacctgaa tcgccagcgg catcagcacc ttgtcgcctt gcgtataata tttgcccata 2820
383 gtgaaaacgg gggcgaagaa gttgtccata ttggctacgt ttaaatacaa actggtgaaa 2880
385 ctacaccagg gattggctga gacgaaaaac atattctcaa taaacccttt agggaaatag 2940
387 gccagggttt caccgtaaca cgccacatct tgcgaatata tgtgtagaaa ctgccggaaa 3000
389 tcgtcgtggt attcactcca gagegatgaa aacgtttcag tttgctcatg gaaaacgggtg 3060
391 taacaagggt gaacactatc ccatatcacc agctcaccgt ctttcattgc catacggaa 3120
393 tccgggtgag cattcatcag gcgggcaaga atgtgaataa aggccggata aaacttgtgc 3180
395 ttatttttct ttacgggtct taaaaaggcc gtaatatcca gctgaacgggt ctggttatag 3240
397 gtacattgag caactgactg aaatgcctca aaatgttctt tacgatgcca ttgggatata 3300
399 tcaacgggtg tatatccagt gatttttttc tccatttttag ctcccttagc tccgaaaaat 3360
401 ctcgataact caaaaaatac gcccggtagt gatcttattt cattatgggtg aaagttggaa 3420
403 cctcaccgga cgtctaattg gagtttagctc actcattagg caccgccaggc tttacacttt 3480
405 atgcttccgg ctcgatatgt gtgtggaatt gtgagcggat aacaatttca cacaggaaac 3540
407 agctatgacc atgattacga att 3563
410 <210> SEQ ID NO: 5
412 <211> LENGTH: 4431
414 <212> TYPE: DNA
416 <213> ORGANISM: artificial sequence
418 <220> FEATURE:
420 <223> OTHER INFORMATION: synthetic construct
422 <220> FEATURE:
424 <221> NAME/KEY: misc_feature
426 <222> LOCATION: (1)..(4431)
428 <223> OTHER INFORMATION: synthetic construct
430 <400> SEQUENCE: 5
431 ctagataacg agggcaaaaa atgaaaaaga cagctatcgc gattgcagtg gcactggctg 60
433 gtttcgctac cgtagcgcag gccgactact gcgatatcga gtttgcagaa acagttgaaa 120
435 gttgttttagc aaaaccccat acagaaaatt catttactaa cgtctggaaa gacgacaaaa 180
437 ctttagatcg ttacgctaac tatgagggct gtctgtggaa tgctacaggc gttgtagttt 240
439 gtactggtga cgaaactcag tgttacggta catgggttcc tattgggctt gctatccctg 300
441 aaaatgaggg tgggtggctct gaggggtggcg gttctgaggg tggcggctct gaggggtggcg 360
443 gtactaaacc tcttgagtac ggtgatacac ctattccggg ctatacttat atcaaccctc 420
445 tcgacggcac ttatccgcct ggtactgagc aaaacccgc taatccta atcttctctg 480
447 aggagtctca gcctcttaat actttcatgt ttcagaataa taggttccga aataggcagg 540
449 gggcattaac tgtttatacg ggcactgtta ctcaaggcac tgaccocggt aaaacttatt 600
451 accagtacac tctgtatca tcaaaagcca tgtatgacgc ttactggaaac ggtaaattca 660
453 gagactgcgc tttccattct ggctttaatg aggatccatt cgtttgtgaa tatcaaggcc 720
455 aatcgtctga cctgcctcaa cctcctgtca atgctggcgg cggtctggt ggtggttctg 780
457 gtggcggctc tgaggggtggc ggctctgagg gtggcggttc tgaggggtggc ggctctgagg 840
459 gtggcgggtc cgggtggcggc tccgggttccg gtgattttga ttatgaaaaa atggcaaacg 900
461 ctaataaggg ggctatgacc gaaaatgccg atgaaaacgc gctacagtct gacgctaaag 960
463 gcaaacttga ttctgtcgct actgattacg gtgctgctat cgatggtttc attggtgacg 1020
465 ttcccgccct tgctaattggt aatgggtgcta ctgggtgatt tgctggctct aattcccaaa 1080
467 tggctcaagt cggtgacggt gataattcac ctttaatgaa taatttccgt caatatttac 1140
469 cttctttgcc tcagtcgggt gaatgtcgcc cttatgtctt tggcgtggt aaaccatatg 1200
471 aattttctat tgattgtgac aaaataaact tattccgtgg tgtctttgcg tttcttttat 1260
473 atgttgccac ctttatgtat gtattttcga cgtttgctaa catactgcgt aataaggagt 1320
475 cttaaggcct gataagcatg cgtaggagaa aataaaatga aacaaagcac tattgcactg 1380
477 gcactcttac cgttgtctct caccctgtt accaaagccg actacaaaga tgaagtgcaa 1440

```

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/522,535

DATE: 02/08/2005

TIME: 11:48:26

Input Set : A:\37629.txt

Output Set: N:\CRF4\02082005\J522535.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date